## DOCUMENT RESUME

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[Award Evaluation Pormula]. b-188611. June 6, 1977. 6 pp.

Decision re: Globe Air, Inc.; by Robert F. Keller, Deputy Comptroller General.

Issue Area: Federal Procurement of Goods and Services (1900). Contact: Office of the General Counsel: Procurement Law I. Budget Function: General Government: Other General Government (806).

Organization Concerned: Forest Service.
Authority: 41 U.S.C. 253. B-183649 (1975). B-186096 (1976).
B-187435 (1977). P.P.R. 1-2.202-1(c).

Company protested the bid evaluation method and formula contained in an invitation for bids for helicopter services. The invitation's award evaluation formula was improper because it was functionally identical to cost per single helitact mission formula found improper in a prior decision. Award on either basis could cost the Government more over the contract term than the award based on an hourly flight rate bid and guaranteed flight hours. Therefore, cancellation of item one and resolicitation using the cost evaluation criteria was recommended to obtain the lowest possible total cost to the Government. (Author/SC)

FILE:

P-188611

DATE: June 6, 1977

MATTER OF:

Globe Air, Inc.

## DIGEST:

Invitation's award evaluation formula, using cost per mission-mile, is improper because it is functionally identical to cost per single helitack mission formula found improper in prior decision and because award on either basis could cost Government more over contract term than award based on hourly flight rate bid and guaranteed flight hours. Therefore, cancellation of item 1 and resolicitation using cost evaluation criteria assured to obtain lowest possible total cost to Government is recommended.

Globe Air, Inc. (Globe) protests the bid evaluation method and formula contained in invitation for bids (IFB) No. R4-77-15 issued by region 4 of the Forest Service, Department of Agriculture, for helicopter services. Globe is primarily concerned with item 1 of the IFB and the Forest Service has agreed to withhold award on item 1 until the protest is resolved, unless emergency conditions require an earlier award.

Item 1 stated the following requirements for the Indianola Base, Salmon National Forest, Salmon, Idaho:

"A standard factory equipped helicopter with seating for six passengers and baggage (fire-fighting tools and equipment) and 1-1/2 hours fuel capable of [hovering in ground effect] HIGE at 8,000' pressure altitude on an 80° dry with an internal payload of 925 pounds, as determined according to standard Forest Service helicopter loading instructions \* \* \*."

The IPB provided the following bid evaluation method and formula:

## "Bid Evaluation

"Awards for each item will be based upon the calculated effectiveness of qualified equipment accomplishing

aerial missions on a per mission mile basis, resulting in the lowest cost to the Government. For
purposes of this evaluation the equipment sclected
will be determined by using a formula based on a
stendard factory equipped helicopter operating
with contract required equipment, with a 170 pound
pilot, 1-1/2 hours fuel, HIGE on takeoff on an 80°
day at 8,000' pressure altitude with an internal
payload of 555 pounds or 925 pounds, whichever is
applicable.

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"Formula to be used:

"HOURLY FLIGHT RATE BID = COST PER MISSION MILE PUBLISHED AIRSPEED (M.P.H.)

"Published airspeed is defined as the FAA approved cruise true airspeed or 90 percent of the approved V.N.E. true airspeed, whichever is less, at the calculated gross weight operating at the altitude and temperature specified above."

The Forest Service received six bids on item 1; the hourly flight rate bid of each and the corresponding cost per mission-mile derived from the evaluation formula follow:

<u>Bidder</u>	Helicopter Model	Airspeed	Hourly Flight Rate	Cost per <u>Mission-Mile</u>
Idaho Helicopters	Allouette III-319B	113 MPH	\$ 394	\$ 3.49
Inland Helicopters	Allouette III-316B	102 MPH	400	3.92
Global Trans & Log	Allouette III-319B	113 MPH	655	5.80
Globe Air, Inc.	Sikorsky S-55T	71 MPH	415	5.85
Kenai Air Service Sky Choppers, Inc.	Bell 205A-l Allouette	100 MPH	850	8.50
one process and	III-316B	102 MPH	1,240	12.16

Globe contends that the application of the IFB's formula is violative of 41 U.S.C. § 253 (1970) because it may result in a greater total cost to the Government over the term of the contract than would

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have resulted by determining the low bidder based solely on the hourly flight rate bid. Globe provides the following example:

"\* \* \* Applying Region 4's formula to hypothetical hourly flight rates bid, if an Alouette III were bid at \$500 per flight hour, an S-55T would not be awarded a contract unless it were bid at an hourly rate of \$362 or less. Conversely, if an S-55T were bid at \$500 per flight hours, an Alouette III would nevertheless be awarded the contract at any hourly flight rate up to \$690 per flight hour. Expressed in terms of percentage, the S-55T has to bid at an hourly flight rate 28% less than the Alouette III to be successful, or the Alouette III can bid any hourly flight rate up to 38% higher than the S-55T and still be awarded the contract."

Globe refers to our decision in Hughes Helicopters, B-183649, September 17, 1975, 75-2 CPD 160, as controlling in this case. In that decision, region 4 of the Forest Service awarded contracts for helicopter services based on an evaluation of the cost required to perform a single initial attack mission--defined as the delivery of personnel and equipment to small fires in the shortest period of time after discovery -- on each base rather than the total cost of the aircraft for the contract period. Hughes protested arguing that the cost per helitack mission was not the controlling cost criteria in view of the many other important factors that should be considered. Hughes showed that, although its cost per helitack mission was \$18.29 higher than a competitor, award to that competitor would cost the Government at least \$28,440 more for the contract period than award to Hughes based on the guaranteed number of flight hours and Hughes' hourly flight rate bid--\$158 lower than its competitor. The Forest Service in that case reported that improper calculations were made--inadvertently the effect of the high skid landing gear was overlooked -- resulting in award for aircraft which did not meet specifications; however, due to the urgency of that fire season, termination would have resulted in complete disruption of fire plans. The Forest Service also advised that future procurements would consider the total cost of the aircraft for the contract period. Under these circumstances we believed that the awards should not be disturbed.

Here Globe argues that the cost per single helitack mission formula in <u>Hughes Helicopters</u> is functionally identical to the cost

per mission-mile formula in the instant IFB and that weither considers the overall cost to the Government during the contract period. Globe concludes that the cost per mission-wile formula used here is invalid under the rationale of the <u>Hughes Helicopters</u> decision.

The Forest Service in response states that the instant formula was developed to comply with the Hughes Helicopters decision to assure that the valid minimum needs for helicopter services would be obtained at the lowest possible cost to the Government. The Forest Service explains that in the establishment of the bid evaluation formula speed was considered to be the best factor for scaling the performance data in the comparison of the different helicopters. because (1) speed is essential to the helitack mission, particularly the initial attack on fires, and (2) the speed relationships between helicopters are relatively consistent over a substantial range of operating conditions, while carrying the same required payload. The Forest Service also reasons that the flight time required is directly related to the speed carability of the helicopter -- the faster the helicopter, the less the time to travel the same distance. Due to the nature of the missions flown and the typical loads required to be moved, any increase in load-carrying capability above that specified will not significantly affect the number of trips required during the contract period. However, a slower helicopter would require a greater number of flight hours to accomplish the same work, which would offset a potentially higher bid flight rate for a faster helicopter.

We note that by multiplying the cost per mission-mile by a constant (the average number of miles per mission), the result yields the cost per single helitack mission, previously admitted by the Forest Service in the Hughes Helicopters decision to be an improper evaluation formula. The formula is improper because it concerns only the helicopter's high-speed initial attack function, which based on the Forest Service's past experience is expected to involve 25 percent of the contract time. The IFB indicates that the balance of the contract time is expected to be utilized with lower priority missions, such as: "[t]ransportation of personnel, equipment, and supplies, scouting, parrol, or photography, work involving prolonged slow-flight, helitanker and fire missions, and administrative flying." The IFB's formula fails to consider the effect of these low-speed missions on the total cost to the Government; for example, if "A" bids \$480 per flight hour and offers a nelicopter with published airspeed of 120 miles per hour, and "B" bids \$410 per flight hour and offers a helicopter with published airspeed of 100 miles per hour, the following would result:

<u>Yiro</u>	Rete	Speed	Guaranteed <u>Hours</u>	Cost Per Mission-Mile	Total Cost
A	≎480	120	200	\$4.00	\$96,000
В	410	100	200	4.10	82,000

Under the IFB's formula, which considers only the high-speed initial attack function estimated to involve 25 percent of the contract time, award would be made to "A" but the total Government cost would be \$14,000 more than the cost of award to "B." Accordingly, the IFB's evaluation formula is improper because it fails to consider the effect on total Government cost of low-speed, lower-priority missions estimated to involve 75 percent of the contract time.

Globe contends that the low bidder should have been determined either by the hourly flight rate bid or by using a ton-mile per hour formula. The ton-mile per hour method was considered and rejected by the Forest Service. Our Office thoroughly considered the ton-mile per hour method in T & G Aviation, B-186036, June 21, 1976, 75-1 CPD 397, and we were not able to conclude that the ton-mile per hour method was the most cost effective method for evaluating this type of work.

Under the other method suggested by Globe to determine the low bidder—based on hourly flight rates bid—the low bidder was the same bidder that was the apparent low bidder using the cost per mission—mile formula. However, since bidders prepared their bids based on the IFB's invalid evaluation formula, and since the lowest three hourly flight rates bid on item 1—\$394, \$400 and \$415—are so close, we find that the only acceptable means to determine the low bidder on item 1 based on hourly flight rate bid or any other valid evaluation method is to cancel item 1 of the IFB and resolicit for item 1 based on a proper evaluation method. See Informatics, Inc., B-187435, March 15, 1977, 56 Comp. Gen. \_\_\_\_\_\_, 77-1 CPD 190.

## Protest sustained.

By letter of today to the Secretary of Agriculture, we recommend that in revising item 1 of the IFB, the Forest Service should consider establishing a reasonable minimum acceptable published air speed for helicopters. And in view of the IFB's stated beginning availability date of July 13, 1977, and the bidders general familiarity with the Government's requirements, the Forest Service should consider using an accelerated bidding schedule as authorized by Federal Procurement Regulations § 1-2.202-1(c) (1964 ed. amend. 85).

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As this decision contains a recommendation for corrective action to be taken, it is being transmitted by letters of today to the congressional committees named in section 236 of the Legislative Reorganization Act of 1970, 31 U.S.C. § 1176 (1970).

Deputy Comptroller General of the United States